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ABSTRACT

As a part of Project TAPE (Tactics for Applying Programs in Education), sponsored by the National Science Foundation and implemented by the University of South Dakota, mass media channels (television, newspapers, radio, educational journals, and directed mailings) were used to create awareness for new National Science Foundation-supported elementary science curricula. This paper includes a section of the questionnaire mailed to a randomly selected sample of the general public, elementary teachers and elementary principals at the conclusion of the project. Survey results revealed that: (1) the use of media channels increased the awareness of principals and teachers, but had little or no effect on the awareness of the general public; (2) there was a definite difference in degree of awareness, with principals being the most aware and general public being the least; and (3) in terms of effectiveness, letters and brochures were most frequently cited, with television and friend/colleague communication listed next. (CS)

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DISSEMINATION OF EDUCATIONAL INFORMATION THROUGH VARIOUS MEDIA CHANNELS

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Presented at the Annual Meeting of the
National Association for Research in Science Teaching
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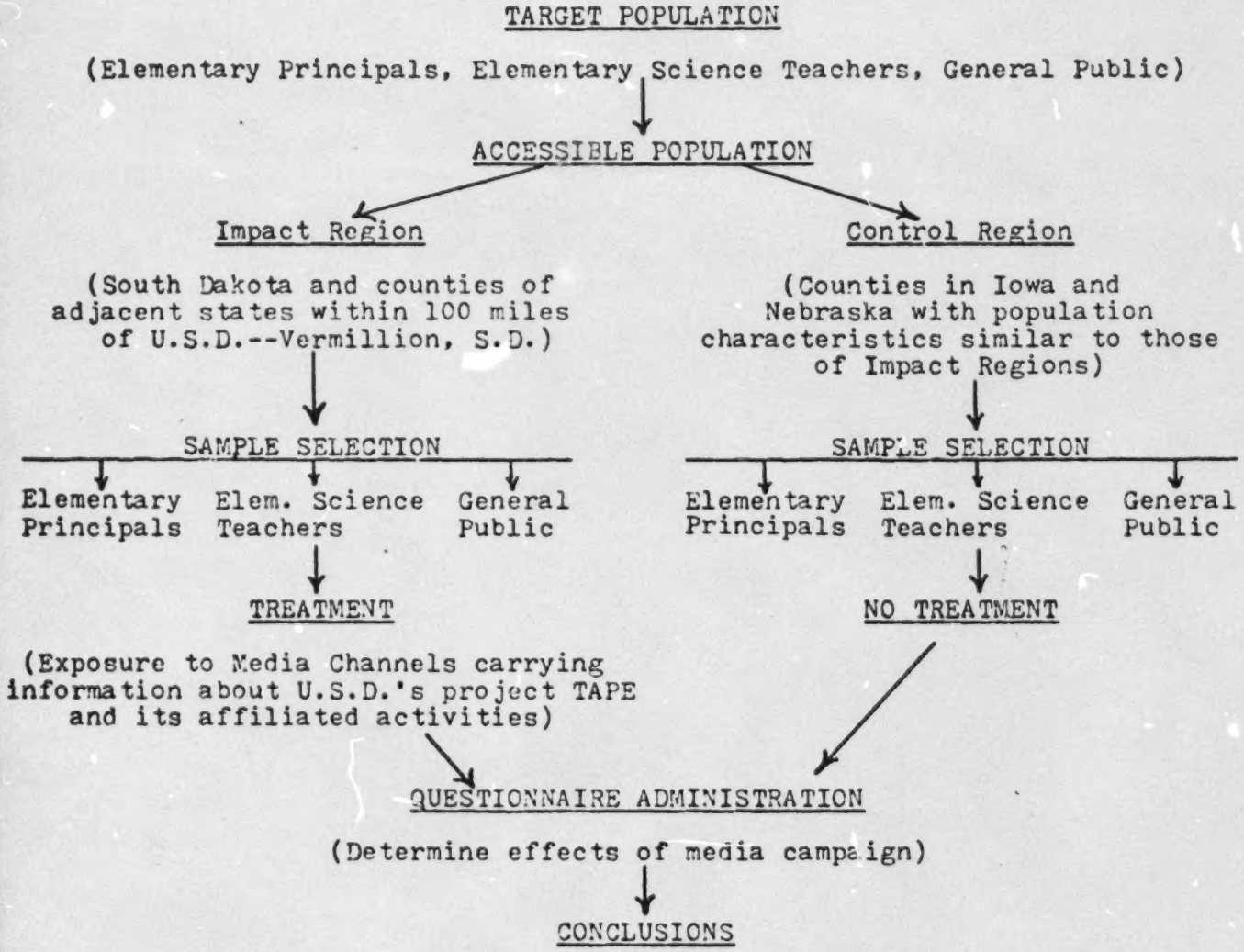
Cincinnati, Ohio

SE 022 292

DISSEMINATION OF EDUCATIONAL INFORMATION
THROUGH VARIOUS MEDIA CHANNELS

SUMMARY


TARGET POPULATION
(Elementary Principals, Elementary Science Teachers, General Public)
ACCESSIBLE POPULATION
Impact Region
(South Dakota and counties of adjacent states within 100 miles of U.S.D.--Vermillion, S.D.)
Control Region
(Counties in Iowa and Nebraska with population characteristics similar to those of Impact Regions)
SAMPLE SELECTION
Elementary Principals
Elem. Science Teachers
General Public
SAMPLE SELECTION
Elementary Principals
Elem. Science Teachers
General Public
TREATMENT
(Exposure to Media Channels carrying information about U.S.D.'s project TAPE and its affiliated activities)
NO TREATMENT
QUESTIONNAIRE ADMINISTRATION
(Determine effects of media campaign)
CONCLUSIONS

1. The use of media channels significantly increased the awareness of principals and teachers regarding Project TAPE but little or no effect was observed for the general public.

2. A definite difference in the degree of awareness of Project TAPE was noted among the sample strata with principals being the most aware and the general public being the least.

3. Media Channels differed in their effectiveness in informing the sample strata. Brochures, letters, television, and friend/colleague were cited most frequently as being the mode by which the respondents learned of Project TAPE.

DISSEMINATION OF EDUCATIONAL INFORMATION THROUGH VARIOUS MEDIA CHANNELS

By

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Introduction

The task of informing residents of the various educational activities being undertaken by their state institutions of higher learning is of great importance to the establishment and maintenance of the institution's role as a leader in public service and information. The greater the degree to which the institution is able to reach its constituency, the better informed that constituency will become regarding the activities of the institution. However, with the multitude of communicational modes available to them today, the institutions are faced with choosing the media channels that will most effectively and efficiently reach the desired target populations.

In 1974, the University of South Dakota was awarded a National Science Foundation Grant (GW 7917), Project TAPE (Tactics for Applying Programs in Education). This Project "is unique both in its extensive use of mass media channels for creating awareness of new curricula and in its establishment of a Resource Services component to stimulate interest among school personnel and facilitate their exploration of

opportunities for implementing available curricula."[1] Television, newspaper, radio, educational journals, and directed mailings (letters, posters, and brochures) were the media channels used to create awareness of Project TAPE and its affiliated curricula dissemination activities.

Population and Sample

The populations used in this study are elementary principals, elementary science teachers, and general public.

The Impact Region in which the media channels were tested is defined as the state of South Dakota and counties of adjacent states which are within 100 miles of the University of South Dakota at Vermillion. The Control Region is defined as counties in Iowa and Nebraska which have population characteristics similar to those in the Impact Region. Counties which have cities with populations over 100,000 persons were deleted. Figure 1 designates the geographic boundaries of the Impact and Control Regions.

(Insert Figure 1)

Procedure

A South Dakota advertising firm was hired to develop

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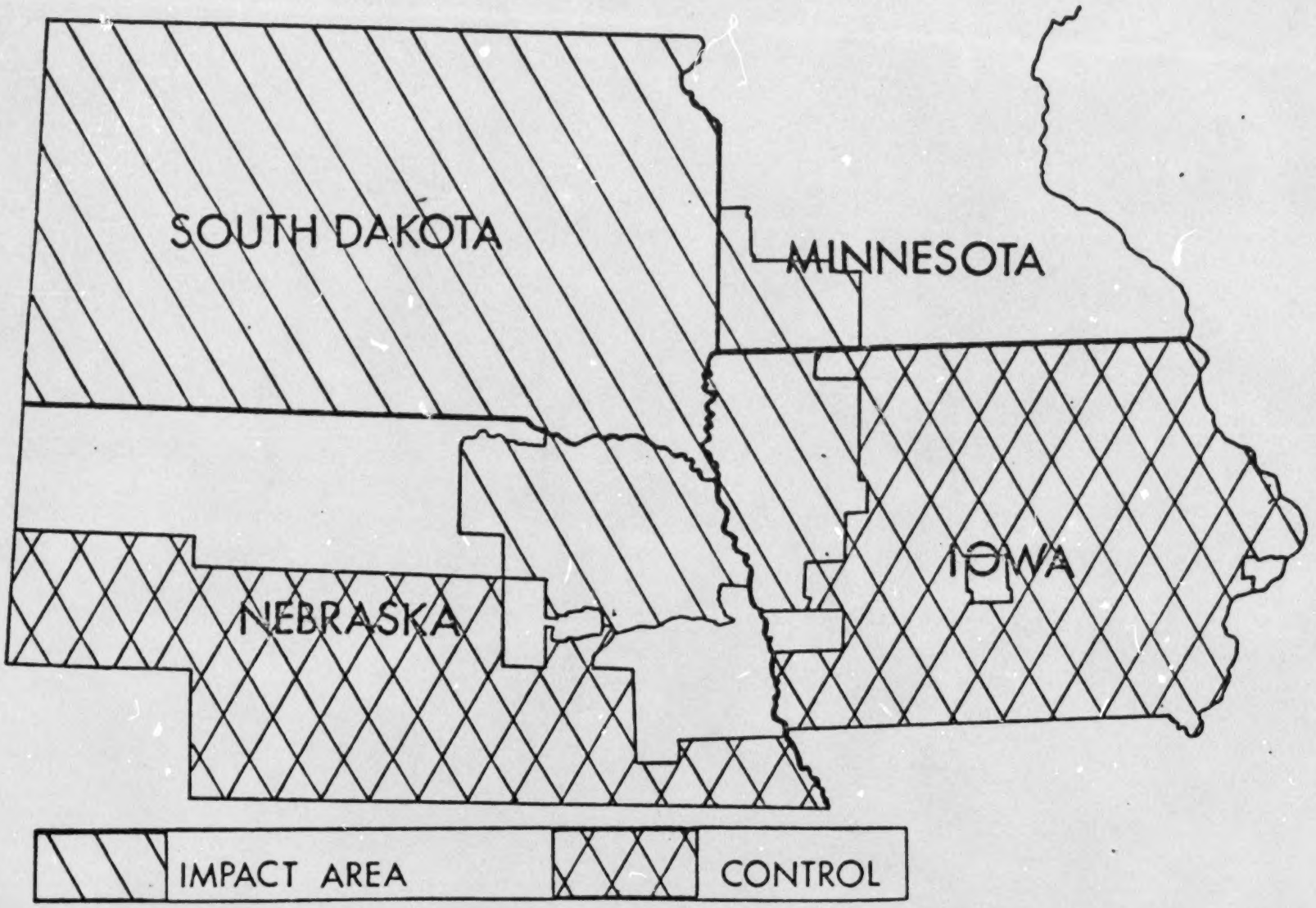
[1]Arlen Gullickson and Jerry Horn, "A Strategy for Disseminating Elementary Science Curricula", School Science And Mathematics, January, 1976, p. 57.

FIG. 1 A MAP OF THE PROJECT IMPACT AND CONTROL AREAS



media materials and coordinate their release. The general public (Impact Region) was exposed to television and radio ads and a newspaper feature story. Teachers and principals (Impact Region) were, in addition, sent brochures, posters, and letters as well as possible exposure to educational journals carrying information about the University of South Dakota's Project TAPE and its affiliated activities. Those sample members residing in the Control Region were not exposed to any of these channels with the possible exceptions of teachers and principals reading about Project TAPE in educational journals.

At the culmination of the media program of awareness, a questionnaire was sent to each teacher, principal, and general public sample member. For follow-up purposes each questionnaire had an identification number. A week later, all those who had not yet responded were sent a follow-up postcard reminder, and two weeks after that, all non-respondents were sent a follow-up letter with a new questionnaire enclosed.

The thrust of this paper focuses upon the responses elicited by these two questionnaire items:

I. b. Prior to receiving this letter were you aware of any of the following, that is, had you seen, heard, or read: (check all that are true)
_____ that the University of South Dakota has been awarded a grant from the National Science Foundation to disseminate elementary science curricula?

_____ of Action Science Programs?
_____ of Resource Services at the University of South Dakota?
_____ That there was a toll free telephone number at the University of South Dakota which anyone could call regarding elementary science curricula?

I. c. If you placed a check mark in any of the responses for "b" above, which media channel(s) brought this to your attention?

___ brochure
___ poster
___ letter/postcard
___ radio
___ friend or colleague
___ television
___ newspaper
___ educational journals
___ other _____

Hypotheses

The three related null hypotheses to which this paper is addressed are:

1. The use of media channels will not significantly increase the awareness of principals, teachers, and general public regarding educational activities (Project TAPE) of the University of South Dakota.

2. There will be no difference in the awareness of educational activities (Project TAPE) for principals, teachers, and general public.

3. There will be no difference among the media channels in their ability to create awareness of educational activities (Project TAPE) for principals, teachers, and general public.

Findings

Response Rates: The data in Table 1 indicate the number of questionnaires sent to each sample strata, the number of questionnaires returned per strata, and the resultant percent response.

(Insert Table 1)

Table 1

Sample Size and Questionnaire Return

N = 1142

Sample	Region	Sample Size	Questionnaires Returned	Percent Response
Principals	Impact	225	213	94.6
Principals	Control	225	187	83.1
Teachers	Impact	350	310	88.6
Teachers	Control	350	293	83.7
General Public	Impact	125	76	60.8
General Public	Control	125	63	50.4
	Total	1400	1142	81.6

The response rates of teachers and principals in both the Impact and Control regions were high (at least 83.7%). The general public, however, did not respond as well (50.4 - 60.8%). This difference could be due to teachers and principals having a more immediate and continual interest in educational matters than do members of the general public.

There is a slight difference in the response rates between samples in the Impact and Control regions--this may be influenced by the selection process of Control and Impact sample members. Since the sample members in the Control region are from counties in Nebraska and Iowa at least 100 miles from the University of South Dakota, their interest in participating in the completion of the questionnaire may not have been as great as it would have been had the questionnaire originated from a more local college or university.

Hypothesis 1: Awareness (Experimental vs. Control Regions):

Hypothesis 1, "The use of media channels will not significantly increase the awareness of principals, teachers, and general public regarding educational activities (Project TAPE) of the University of South Dakota", may be tested by comparing the "awareness" of each sample strata in both the Control and Impact regions. Table 2 reports the number and percent of respondents indicating awareness of Project TAPE and its associated activities (i.e., completion of questionnaire item "I. b.").

(Insert Table 2)

The data in Table 2 clearly indicate that principals and teachers from the Impact Region are more "aware" of each point listed in questionnaire item "I. b." than are their Control Region counterparts ($p < .05$). The difference in "awareness" between the general public--Impact Region and general public--Control Region, however, is not significant at the .05 level.

The data tabulated in Table 2 rejects Hypothesis 1 for the teachers and principals, but does not do so for the general public. In other words, the use of media channels DOES significantly increase the awareness of teachers and principals ragarding educational activities (Project TAPE), but has a negligible effect on the general public.

Hypothesis 2: Awareness (Across Sample Strata):

Data for this hypothesis, "There will be no difference in the awareness of educational activities (Project TAPE) for principals, teachers, and general public.", were collected from questionnaire item "I. b." as was the case for Hypothesis 1. However, in this section, only the responses of awareness for the samples from the Impact Region were compared since only the differences in awareness among principals, teachers, and general public having received the media presentations were deemed applicable to Hypothesis 2.

Table 3 includes three columns of numbers: column one

Table 2

Number and Percent of Each Strata Indicating

Awareness of Project TAPE and its Associated Activities

N = 1142

Sample Strata	USD Being Awarded Grant	Action Science Program	Resource Services	Toll-free Number
Principals - Impact N=213	169(79%)	101(47%)	141(66%)	163(77%)
Principals - Control N=187	47(25%)	15(8%)	15(8%)	18(10%)
Teachers - Impact N=310	126(41%)	98(32%)	94(30%)	109(35%)
Teachers - Control N=293	26(9%)	42(14%)	11(4%)	8(3%)
General Public - Imp. N=76	9(12%)	3(4%)	9(12%)	7(9%)
General Public - Con. N=63	3(5%)	5(8%)	4(6%)	4(6%)

indicates the total number of questionnaire respondents per strata; column two reports the number of respondents checking at least one item of "awareness" in questionnaire item "I. b."; and column three denotes the percent of respondents checking at least one item of "awareness" in questionnaire item "I. b.".

(Insert Table 3)

As can be seen from the data in Table 3, there was a difference in "awareness" reported by the questionnaire respondents. Principals were the most "aware", teachers next, and general public least "aware" of Project TAPE and its related activities. Thus it appears as if Hypothesis 2 is refuted, that is, there IS a difference in awareness produced by the media presentation in samples of principals, teachers, and general public.

Although the data in Table 3 clearly rejects Hypothesis 2, a point regarding its interpretation should be mentioned. All sample strata in the Impact Region were exposed to media presentations explaining Project TAPE via television, newspaper, and radio. Teachers and principals, in addition, received directed mailings of brochures, posters, and letters. This additional exposure may not only have served as a separate media source, but could also have reinforced and intensified the interest teachers and principals may have begun from the

Table 3

Comparison of Awareness For

Teachers, Principals, and General Public

Sample Strata	Number of Respondents	Number Checking At Least One Item of Awareness	Percent Of Aware Respondents
Principals	213	186	87.3%
Teachers	310	191	61.6%
General Public	76	21	27.6%

television, newspaper, and radio exposure. Therefore, since teachers and principals were exposed to the more personal directed mailings as well as the sources shared by the general public, perhaps it is not really fair to compare their "awareness" with that of the general public.

Hypothesis 3: Media Channels:

Hypothesis 3, "There will be no difference among the media channels in their ability to create awareness of educational activities (Project TAPE) for principals, teachers, and general public.", is analyzed by combining the response data from questionnaire item "I. b." with that of "I. c.". That is, those responding they were "aware" of Project TAPE and its affiliated activities were asked to indicate the media channels by which they learned of it. Only those respondents indicating an "awareness" of the Project were included. Their total responses for each media channel were combined to produce the data listed in Table 4.

(Insert Table 4)

The data in Table 4 indicates a difference in the effectiveness of media channels used to create "awareness" of Project TAPE. It would seem that brochures, letters/postcards, television, and friend/colleague communication are by far the most effective knowledge dissemination channels. Thus, Hypothesis 3 is refuted, that is, media channels DO

Table 4

Total Number of Times Each Media Channel Was Checked as Source of Awareness

Media Channel	Times Checked
Brochure	209
Letter/postcard	205
Television	172
Friend/colleague	150
Newspaper	79
Educational Journals	78
Posters	77
Radio	33
Other	43

vary in their ability to communicate educational information.

Conclusion

The findings of this study have shown media channels can play an important role in the dissemination of educational information. An active media campaign emphasizing brochures, letter/postcards, television, and friend/colleague communication can increase the "awareness" of elementary principals and elementary science teachers in the educational activities of their institutions of higher learning. Unfortunately, such an active campaign has little ability to make the general public more "aware" of that institution's educational activities.

An interesting area of further study would be to obtain and compare budgetary figures to ascertain the cost-effectiveness of each media channel and thereby determine its efficiency.